



# Monterey Bay National Marine Sanctuary

## Sanctuary Office Report



Volume 6, Number 6

A REPORT FOR THE SANCTUARY ADVISORY COUNCIL MEMBERS

REPORTING PERIOD: OCTOBER 12, 2009 – NOVEMBER 25, 2009

### ABOUT THE SANCTUARY

Designated in 1992, the Monterey Bay National Marine Sanctuary (MBNMS or Sanctuary) is a federally protected marine area offshore of California's central coast. Stretching from Marin to Cambria, the MBNMS encompasses a shoreline of 276 miles and 6,094 square statute miles of ocean.

Supporting one of the world's most diverse marine ecosystems, it is home to numerous mammals, seabirds, fishes, invertebrates and plants in a remarkably productive coastal environment. The MBNMS was established for the purpose of resource protection, research, education and public use of this national treasure.

## NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION (NOAA) AND OFFICE OF NATIONAL MARINE SANCTUARIES (ONMS) NEWS

### Science for Marine Spatial Planning Symposium

Nearly 300 people from NOAA, other federal agencies, and numerous non-governmental organizations attended a symposium on science used to support ocean and coastal marine spatial planning. About half attended in person and half via a Webinar webcast. The program organizers were pleased that attendance remained high all day, seldom dipping below 100 in the Science Center or on the web. Seventeen speakers, representing NOAA (NOS, NMFS, GCIL), the Minerals Management Service, the Northwest Indian Fisheries Commission, non-governmental organizations (Conservation International, The Nature Conservancy), and academic institutions (UCSB, UW), presented talks

The symposium was organized by the Office of National Marine Sanctuaries and achieved its primary goal, which was to provide the target audience with an appreciation of practical examples of natural and socioeconomic science that has been applied to coastal and marine spatial planning in the past. Presenters from programs with experience in spatial problem solving and management, including

ONMS, NMFS, among others, described issue-driven projects for place-based management.

### Agriculture Industry Partnership With Monterey Bay Sanctuary Celebrates 10 years and Honors 2009 Stewardship Award Winners

On Oct. 23 the MBNMS and its partners in the Agriculture Water Quality Alliance (AWQA) honored winners of the alliance's 2009 Stewardship Awards for exceptional strides in farm water quality protection and community leadership. The event, at Moss Landing Marine Laboratories, marked the 10-year anniversary of the alliance's agricultural and environmental stewardship efforts. Dr. Jane Lubchenco, under secretary of commerce for oceans and atmosphere and NOAA administrator, provided welcoming remarks commending growers and agency partners for their collaborative approach to protecting land and marine resources. Award winners also received certificates of recognition on behalf of Congressman Sam Farr (17<sup>th</sup> District), Assemblymember Bill Monning (27<sup>th</sup> District), and local mayors.

Winners of the 2009 AWQA Stewardship Award for exemplary water quality protection on individual farms are:

- Steve Pederson and Jeanne Byrne, High Ground Organics (Watsonville)
- Ian Teresi and Tim Chiala, George Chiala Farms (Morgan Hill)

The winner of the 2009 AWQA Confluence Award for exceptional collaborative efforts to address agricultural water quality issues collectively is:

- The Quail Creek Subwatershed Working Group growers and support staff (Monterey County)

### Monument Featured in Black and White

Renowned underwater photographer Wayne Levin was invited to join NOAA scientists and divers on a research cruise to Papahānaumokuākea Marine National Monument over the summer. Levin is well known, particularly for his black and white underwater imagery honed over 30 years of photography in the ocean. His transformation from color to B&W was the result of discovering that while shooting surfers in Hawaii, everything was different shades of blue and "it was all very murky looking." Levin participated in many of the more than 100 research dives conducted in late August and early September 2009 and shot thousands of images. Some of his favorites include: an end-of-dive encounter with as many as 18 sharks off Kure Atoll; 10 endangered Hawaiian Monk Seals resting on a beach on the mystery Island of Nihoa; and on another mystery island, Mokumanamana, encountering a huge school of kawakawa mixed with rainbow runners. His work will be featured during the summer of 2010 at an exhibition in association with the Museum of Contemporary Art in Honolulu as well as in the book, *Papahānaumokuākea*, now being written and produced.

## **National Marine Sanctuary News**

### **Channel Islands NMS**

On October 26, the National Marine Sanctuary Foundation received notice of a \$45,000 award from the Amgen Foundation to support the Channel Islands National Marine Sanctuary's Multicultural Education for Resource Issues Threatening Oceans (MERITO) Academy program in the Santa Barbara region during the 2009-2010 school year. The grant was awarded through a competitive process. Amgen Foundation's contribution will provide 26 minority-serving educators with professional development services in marine environmental education, and will provide 900 under-served minority students 2-3 meaningful watershed, coastal and island field experiences. The funds will sponsor field trip transportation for the students and staff time for instruction during field experiences. Through the MERITO Academy program students are immersed in Earth and ocean science education, and learn the connections between our watersheds, coasts, open oceans and atmosphere, while understanding the impact of our daily actions on the health of our oceans and climate.

### **Cordell Bank NMS**

The Cordell Bank National Marine Sanctuary celebrated its 20th anniversary by recognizing the Cordell Expeditions dive team that was instrumental in the designation of the Sanctuary in 1989. This intrepid team made dozens of deep dives on Cordell Bank descending 120 to 200 feet exploring the shallow ridges on the Bank between 1979 and 1985. Congresswoman Lynn Woolsey presented 15 of the original Cordell Expeditions divers with Congressional certificates and addressed the public audience at the community center in Point Reyes. The rest of the evening consisted of a panel interview with core members of the team documenting the interesting and unique stories of their dive experiences. The panel interviews were led by the sanctuary's education coordinator, Jennifer Stock, and local historian, Dewey Livingston. These interviews are part of an ongoing oral history project to create a permanent written record of the Cordell Expedition activities that led to sanctuary designation. Sanctuary superintendent Dan Howard opened the evening by recapping sanctuary accomplishments in the last five years and showing historic and recent video footage from Cordell Bank.

### **Florida Keys NMS**

After years of preparation, to include extensive scoping meetings with Keys dive and snorkel charter operators, FKNMS welcomed the first tour operator into its Blue Star recognition program last week. Blue Star was established by FKNMS to recognize charter operators that work to protect the coral reef ecosystem of the Florida Keys by promoting proper reef etiquette and educating their customers about the reefs, and the sanctuary and its regulations. Staff members of Blue Star operators are required to participate in FKNMS training annually and, in turn, impart their knowledge to their customers. Recognized operators must offer conservation-related dive courses and participate in activities such as fish counts and reef clean-ups. The reefs of the Florida Keys beckon millions of visitors as year and the Blue Star program helps build the capacity of local tour operators to act as front-line educators and foster respect and understanding among their customers.

### **Flower Garden Banks NMS**

Flower Garden Banks National Marine Sanctuary education team continues to play a key role in organizing the 2009 Conference for the Advancement of Science Teaching (CAST). Education Outreach Specialist, Kelly Drinnen, is the program chair for this year's conference, which is being hosted in the sanctuary's home town of Galveston. Kelly led the effort to select and schedule over 500 short courses and workshops that will be offered during the 4-day-long conference. Education Outreach Coordinator, Shelley Du Puy, is coordinating the One NOAA booth at the conference. Representatives from NOAA Corps, Weather Service, Fisheries, PORTS, and Law Enforcement are being invited to participate in staffing the booth. The previously planned field trip aboard the R/V Manta has been cancelled due to budget issues.

### **Hawaiian Islands Humpback Whale NMS**

HIHWNMS scientist David Mattila gave a keynote talk to the 18th Biennial Conference of the Society for Marine Mammalogy. His invited talk highlighted the two large Ocean-basin studies that he has had the good fortune to be integrally involved in; the YoNAH (N. Atlantic) and SPLASH (N. Pacific) Projects. The latter was largely initiated, coordinated and funded by HIHWNMS and its NOAA Fisheries partners starting in 2003. Both projects are seen by the international marine mammal science community as tremendous successes, and examples of what can be accomplished by cooperation between researchers and countries, as the two projects represented collaborations between close to 500 researchers from 15 countries. This talk exposed approximately 1500 scientists from around the world to the significant roll that NOAA (and HIHWNMS) played, both nationally and internationally, in the successful completion of these two ground-breaking studies.



## MONTEREY BAY NATIONAL MARINE SANCTUARY NEWS AND PROGRAM UPDATES



### MANAGEMENT

#### **MBNMS sponsors the premier of an Italian film documentary - "Il Mare di Joe/The Sea of Joe from Sicily to Alaska"**

On the evening of October 22nd, approximately 440 people showed up to participate in a MBNMS and WCRO sponsored community event highlighting Monterey's historical fishing heritage at the Monterey Conference Center. The 2009 Italian film documentary "Legendary Fishermen - Il Mare di Joe/Joe's Sea from Sicily to Alaska" by Enzo Incontro, film director and manager for a marine protected area in Sicily, follows the story of Sicilian fishermen who became legendary after traveling for 40-day trips in small sailboats from Monterey to the coast of Alaska for salmon fishing. The event began with introductions from Bill Douros, West Coast Regional Director, Chuck Della Sala, the Mayor of Monterey, and Lucio Antinoro, the Mayor of Favignana, Sicily. After the movie, Karen Grimmer hosted a discussion with Enzo and two other Sicilian fishermen who shared their family stories associated with emigrating to the US from Marettimo and settling in the Monterey fishing community. The evening ended with a reception for everyone to enjoy, which continued into the evening. Many thanks to Dawn Hayes for setting up the sanctuary exhibit and to the program operations team for all their support.



#### **October 14th Association of Monterey Bay Area Governments (AMBAG) meeting**

On October 14th, the MBNMS Superintendent, Paul Michel, gave an hour-long, in-depth presentation to the evening meeting of the Association of Monterey Bay Area Governments (AMBAG). The intent of the summary was to give an annual update to new and old members of the Board, and to encourage the Board to leverage their position as a regional planning group in a new direction of partnership with the MBNMS. The AMBAG President commended Paul for presenting one of the best presentations AMBAG has ever seen. The AMBAG Board did not have the time they needed to discuss their future role with MBNMS, so they have continued that deliberation for the December meeting.

#### **October 21st Sustainable Tourism Forum**

Recently there have been a number of initiatives and efforts to redefine tourism opportunities and management of public resources for the Monterey Bay region. Given that, and in partnership with the Bureau of Land Management's California Coastal National Monument, the MBNMS co-hosted a forum to discuss the multitude of interests and actions, that might result in a team process for the consideration, definition, coordination, and support of local tourism opportunities. The overall goal is to create an action model for sustainable tourism for the Monterey Bay Region. The meeting was successful in that approximately 25 organizations turned out in support of furthering the effort and most committed to lending support in some way.

#### **MBNMS Superintendent Holds Town Hall Meeting**

MBNMS Superintendent Paul Michel worked with southern region education staff member Carolyn Skinder to host a town hall style meeting in Cambria to discuss sanctuary issues on Friday October 30th. Typically, the Sanctuary Advisory Council meets in Cambria each October, to allow for citizen participation from this farthest corner of the MBNMS. Due to budget constraints, the SAC could not meet in Cambria, but Superintendent Michel wanted to ensure there was an update on the sanctuary and locals could voice their concerns in a public forum. 25 members of the public attended the evening portion of the day and were interested in the condition of the wreck of the T/V *Montebello* (and it's cargo), boundary expansion to the south and desalination projects.

#### **Meeting with Business and Tourism Leaders**

On November 19th, Superintendent Paul Michel, and Deirdre Whalen met with Mike Bekker, Cannery Row Company and Bob Massaro, Monterey Fisherman's Wharf Association. Both individuals are on the MBNMS SAC representing the tourism seats. The

focus of the discussion centered around possible areas of interest for both representatives. Suggestions for Business and Industry involvement included galvanizing around eco-tourism opportunities and the Blue Ocean Filmfest.

## RESEARCH AND MONITORING



### **Sanctuary Characterization and Image Display (SCID) website now available**

The Sanctuary Characterization and Image Display (SCID) website was created to disseminate Monterey Bay National Marine Sanctuary (Sanctuary) characterization data. Sanctuary characterization data includes videos, still frames, and other scientific data collected during research cruises using towed camera sleds, remotely operated vehicles, autonomous underwater vehicles, and human-occupied submersibles. These research platforms are towed or flown along predetermined transects and record video footage of the seafloor. Data are then collected and analyzed to determine habitat types and associated faunal assemblages. Spatially referenced media are then posted on the SCID website for viewing. The SCID website is a powerful tool for researchers and resource managers attempting to better understand

what resources exist within the Sanctuary. In addition, the SCID website serves as an outreach and education tool for the public interested in Sanctuary ecology. Giving the public a direct link to the array of biodiversity found in the Sanctuary can foster a sense of pride and marine stewardship that will greatly benefit the Sanctuary. SCID is a collaborative effort between the Institute for Applied Marine Ecology (IfAME) at California State University Monterey Bay (CSUMB), and the Sanctuary Integrated Monitoring Network (SIMoN) program at the Monterey Bay National Marine Sanctuary. To view the SCID website see, <http://montereybay.noaa.gov/research/naturalresources.html>.

### **SIMoN staff concludes dives for 2009 BSNC project on R/V *FULMAR***

On October 6 and 7, SIMoN staff successfully surveyed 4 sites for the Big Sur Nearshore Characterization (BSNC) project using the R/V *FULMAR*, ending the 2009 BSNC diving season. Given recent permit approvals for CalTrans to sidecast materials at several sites, divers surveyed four sites with either existing sidecasting (Willow Creek) or soon to be used sites (Dogs, Grimes Cr, and Lafler Cr). Lafler and Grimes are particularly interesting sites, with high, solid rock cliffs, steep underwater drop offs, high invertebrate and fish diversity, and proximity to the head of Partington Canyon. This project builds upon marine resources surveys conducted from 2003 to 2005 as part of the Coast Highway Management Plan (CHMP) for Highway 1 in Big Sur. These data describe baseline conditions and will be re-surveyed after the winter storms.

### **UC Santa Cruz chemists collect soil bacteria while diving from the R/V *FULMAR***

On October 6 and 7, SIMoN staff facilitated research dives by Dr. Roger Linington and his staff from the Chemistry Department at the University of California at Santa Cruz. Linington and a graduate student collected sediment samples while diving along the Big Sur coast, searching for potential marine natural products. The research pursued in Linington's laboratory focuses on two main areas of interest: drug discovery for neglected infectious diseases, and the use of natural products as probes for biological systems. Within these two related areas Linington is interested in the discovery of novel therapeutics for diseases including malaria, TB and dengue fever; the identification of novel targets for drug intervention; the determination of specific protein function using small molecule probes and the concerted development of all of these ideas to push initial drug leads from early-stage discovery to preclinical development. Linington holds a Sanctuary Research Permit for small-scale collection of sediments (non-commercial purposes) to study marine bacteria as a source of novel secondary metabolites with biomedical applications. Linington successfully collected samples from four sites while piggy-backing on the SIMoN Big Sur Nearshore Characterization (BSNC) project aboard the R/V *FULMAR*.

### **Sensors for the West Coast Observation Project successfully deployed**

On October 20-21, SIMoN staff aboard the R/V *FULMAR* supervised diving operations to deploy thermistor arrays on 7 moorings within the Monterey Bay National Marine Sanctuary. The West Coast Observation Project (WCObs) deals with physical data collected at the five sanctuary sites located on the west coast (Olympic Coast, Cordell Bank, Gulf of the Farallones, Monterey Bay, and Channel Islands). The project focuses on various data streams including ocean temperature, current speed and direction, oxygen, salinity, wind speed and direction, turbidity, and fluorescence collected at numerous moorings located within each of the five sanctuaries. These moorings are maintained and operated in collaboration with the Partnership for Interdisciplinary Studies of Coastal Oceans (PISCO) and the University of California-Davis, Bodega Marine Laboratory as part of the Pacific Coast Ocean Observing System (read more about PaCOOS at <http://pacoos.org>). These data are used to determine how nearshore dynamics in the water column influence rockfish recruitment into kelp forests along the central coast of California. Sensors are swapped out on a 90-day cycle.



### **2009 Condition Report Presented at Local Water Quality Workshop**

On October 23, information on the MBNMS 2009 Condition Report was presented at the Watersheds, Water Quality, and Climate Change workshop hosted by MBNMS and the Central Coast Wetlands Group at the Moss Landing Marine Laboratory. Jennifer Brown, SIMoN Ecosystem Scientist, provided background information on the condition report and the status and trend ratings related to water quality and contaminant levels in sanctuary habitats. The presentation reviewed the types of water quality data currently available to answer the questions in the condition report and highlighted information gaps that could be filled by workshop participants.

### **SIMoN staff gives talk at Western Society of Naturalists annual conference**

On November 13 and 14th, SIMoN staff attended the 90th annual conference of the Western Society of Naturalists (WSN). This year the meeting was held in Monterey, CA, with over 450 scientists and students in attendance. Staff served as a chair for one of the concurrent sessions entitled 'Invasive Species', gave a talk entitled 'Coming to a harbor near you: the invasive Asian kelp *Undaria pinnatifida*', and judged over 15 graduate student talks. WSN consists mainly of marine ecologists, with a high proportion (nearly 50%) of talks given by graduate students.

### **MBNMS Research Activity Panel Meets at MBARI**

The MBNMS Research Activity Panel (RAP) met Friday November 13<sup>th</sup> at the Monterey Bay Aquarium Research Institute in Moss Landing, CA. Agenda items included: MARS Cable Research, Ocean Acidification, MBNMS Condition Report, and California State Furloughs. For information on the RAP, see [http://montereybay.noaa.gov/intro/advisory/rap\\_objectives.html](http://montereybay.noaa.gov/intro/advisory/rap_objectives.html).

### **MBNMS Staff presents Davidson Seamount Research at Marine Spatial Planning Symposium**

On November 16<sup>th</sup>, MBNMS Research Staff gave a presentation on Davidson Seamount research and protections, at the ONMS-sponsored Science for Marine Spatial Planning Symposium in Silver Spring, Maryland. The symposium focused on the importance and value of the natural and social sciences in resolving spatial use conflicts in the ocean. More than 25 NGOs were represented, along with industry attendees from oil and gas, boating, sportfishing, and renewable energies. There were attendees from at least five legal consulting firms, and representation of the Inter-American Development Bank. Staff members from Reps. Mike Thompson, Lois Capps, and Sam Farr were also in attendance. Non-NOAA government agencies represented were: EPA, US Coast Guard, MMS and DOE. About half of the nearly 300 attendees came in person and half participated via the webinar webcast.

### **SIMoN staff conducts field survey for the invasive kelp *Undaria* in Pillar Point Harbor**

On November 19, Sanctuary Integrated Monitoring Network (SIMoN) staff traveled to Pillar Point Harbor and surveyed the floating docks, pier pilings, and vessels for the invasive Asian kelp *Undaria pinnatifida*. *Undaria* has been recently discovered in multiple harbors within the Bay. In coordination with SIMoN staff and the State Lands Commission, Smithsonian Environmental Research Center (SERC) researchers conducted a systematic survey of the areas surrounding those infested by the kelp. After 3 hours of searching, the four snorkelers found only one individual that was attached to harbor structures, but more than 60 individuals to one sailboat that was particularly encrusted with a variety of marine life, suggesting that the *Undaria* came from a different harbor. This assumption requires validation, however. SIMoN will continue to coordinate with SERC staff and other agencies to remove the invader before it spreads.

### **SIMoN staff talk to environmental policy college class about resource management**

On November 20, Sanctuary Integrated Monitoring Network (SIMoN) staff gave a presentation to an environmental policy college class from California State University, Channel Islands. Topics included resource management and policy issues at the Monterey Bay National Marine Sanctuary and how policies are shaped by research and vice-versa.

## **RESOURCE PROTECTION**

### **Reducing Pesticides in the MBNMS**

On October 8<sup>th</sup>, WQPP staff presented at the Pesticide Applicators Professional Association (PAPA) annual seminar in Salinas, CA. The audience was comprised of approximately 250 urban landscapers and agricultural representatives. Staff introduced them to the sanctuary; the biological diversity, our authority, our programs, and impacts to the sanctuary from pesticides. The presentation then focused on reducing runoff and pollution prevention in both urban and agricultural land uses.

### **MBNMS Completes Mission to Remove Lost Fishing Gear in State MPA**

Staff from Monterey Bay NMS and Cordell Bank NMS completed a thirteen-day Lost Fishing Gear (LFG) removal mission on October 31<sup>st</sup> aboard the fishing vessel *Donna Kathleen*. The purpose was to locate fishing gear at Portuguese Ledge State Marine Conservation Area and test methods for deepwater fishing gear retrieval using an ROV. The ROV was able to get on site fairly quickly at about 300ft, and find the primary targets which were two large nets lofting in the water column, a crab trap and a large gill net. Gear was initially observed by NOAA Fisheries Delta Sub surveys in 2003, 2004 and 2007. Over the first five days, two methods were tested: 1. Using the ROV's remote manipulator arm with cutting tool to clip sections of a net, and then a second manipulator to grab the net fragments and pull up to the vessel as the ROV is retrieved; 2. Using an open carabina attached to a spool line mounted on top of the ROV, an arm clips and locks the carabina (metal loop) onto a section of net and then the spool line is deployed as the ROV is retrieved. The spool line is then transferred to the vessel's hydraulic winch and the net is hauled up. The two large entangled nets (over 100ft and attached to a boat anchor) had a large abundance and diversity of attached organisms, including the encrusting coral "*Lophelia pertusa*" that researchers have not had the opportunity to collect in this region. We photographed all specimens and preserved some of the unidentified corals, tunicates, sponges, and brittle stars, which will be further processed for ID. MBNMS is also partnering with Sea Doc Society, Cal Fish & Game and The Nature Conservancy on policies and procedures for deepwater fishing gear removal. As part of the education and outreach component, a number of newspaper articles were released, and a local TV segment ran using the underwater and topside video. Other local fishermen heard about the efforts, and contacted the F/V *Donna Kathleen* to request assistance in finding recently lost fish traps. Approximately, 500lbs of lost fishing gear was removed from the Sanctuary.



This project, funded by the M/V Med Taipei Restoration Plan and Sea Doc Society, met and exceeded our goals to test methods for locating and retrieving lost fishing gear using an ROV in deepwater (beyond SCUBA), and to provide outreach to the public through images and video. The collection and study of deepwater specimens that attach to nets is an opportunity unique to this type of project. On the last day of the mission, while conducting transect surveys in the state MPA site, we marked over 70 recreational fishing gear targets. This finding supports recent evidence from NOAA Fisheries that recreational fishing gear accounts for 93 per cent of underwater trash. Lastly, two ancillary goals were to upgrade the CBNMS ROV with more power and capability for LFG retrieval and other projects, and train additional sanctuary staff on ROV ops and use of navigational software. These added capabilities will allow west coast sites to support ROV projects more effectively.

The LFG webpage can be found at: <http://montereybay.noaa.gov/resourcepro/resmanissues/lostgear.html>

Images of the LFG project can be found at: <http://www.facebook.com/album.php?aid=114556&id=99323009915>

### **Record Breaking First Flush**

In the early morning hours on Tuesday, October 13<sup>th</sup>, 114 volunteers mobilized during the first significant storm of the season to collect water samples from 50 outfalls located as far north as Montara, CA (along the San Mateo coastline) south to Carmel-by-the-Sea (Monterey County). An average of 2.5" of rain fell in a 24 hour period carrying with it months of accumulated pollutants from parking lots, buildings and streets. The water samples will be tested for bacteria (*E. coli*, enterococcus), nutrients (urea, nitrate and phosphate), and metals (copper, zinc, lead). This was the 10th anniversary of the First Flush program funded by the sanctuary, local cities and counties.

### **Marine Interest Group of San Luis Obispo County and Integrated Ecosystem Assessment**

The Marine Interest Group (MIG) of San Luis Obispo County hosted a learning session on Integrated Ecosystem Assessments (IEAs) at an October 14, 2009 meeting in Morro Bay, CA. Lisa Wooninck, Resource Protection Specialist, was invited to provide a brief update of NOAA's plans for an IEA of the California Current Large Marine Ecosystem. The MBNMS is part of a group of managers assisting NOAA Fisheries scientists, who are leading this effort, with identifying and prioritizing management needs that could be addressed with a California Current IEA.

### **Ocean View Plaza Discussion & Update**

The MBNMS Permit Coordinator met with attorneys from the Lombardo & Gilles law firm to discuss the progress of the permitting process for the Ocean View Plaza. MBNMS staff have been following the evolution of this project since circa 1999. Recently the California Coastal Commission and the Regional Water Quality Control Board, along with a host of state and federal agencies granted their approvals of the project, which includes a retail, restaurant, and condominium facility in the area adjacent to El Torito Restaurant

and across from the Trailside Cafe along Cannery Row. The majority of the project will be constructed well above mean high tide on the bluff area, however, the project will be placing three pipes and associated marker buoys within the MBNMS for the purpose of accommodating a desalination facility. The MBNMS is awaiting the final findings from the Coastal Commission and expects to issue an Authorization of the project shortly.

#### **Technical Tools Developed by SIMoN Staff Presented at Local Science Symposium**

On October 23, an update to the Central Coast Water Quality Data Synthesis, Assessment, and Management (SAM) Project was presented at the Watersheds, Water Quality, and Climate Change symposium hosted by MBNMS and the Central Coast Wetlands Group at Moss Landing Marine Labs, California. Gary Conley, SIMoN Water Quality Data Analyst, gave a talk to highlight newly developed technical tools that will be the building blocks of our regional water quality data-sharing infrastructure on the Central Coast. The tools presented to the symposium attendees will improve coordination of water quality monitoring programs in the region and facilitate discovery, access, and use of water quality data by agency staff and scientists.

#### **Sanctuary Staff Participate in Santa Cruz County Conservation Planning**

Sanctuary Water Quality Protection staff attended the Conservation Blueprint for Santa Cruz County Technical Advisory Workshop on Tuesday, October 27 held by the Santa Cruz County Land Trust. The Conservation Blueprint is a science and community-based project designed to identify the highest priorities for conservation in Santa Cruz County over the next twenty years. The objective is to synthesize and critically evaluate existing and new data, as well as expert opinion on biodiversity, water resources, agriculture and working lands, and recreational and educational opportunities. The Conservation Blueprint project goals overlap substantially with those of the Sanctuary Water Quality Protection Program and both groups have identified similar information needs for effective resource management in coastal watersheds and nearshore environments.

#### **California Water Quality Monitoring Collaboration Network Webinar**

On October 28th, Lisa Emanuelson, Volunteer Monitoring Coordinator, gave a presentation via webinar to the statewide California Water Quality Monitoring Collaboration Network. The topic of the webinar was citizen water monitoring programs in watersheds flowing to the Monterey Bay National Marine Sanctuary. The presentation highlighted sanctuary programs conducted by the Water Quality Protection Program and its partners: First Flush, Urban Watch and Snapshot Day. The goal of this forum is to promote communications between citizen monitoring programs around the state.



#### **Mythbusters TV episode**

Recently the television show "Mythbusters" completed filming within the MBNMS. Their intent was to determine whether historic deep divers were subject to death after their airhoses were cut-- specifically Mythbusters wanted to determine if it were possible that the diver's body would be compressed entirely into the diving helmet. Although a permit was not required for this activity, as there was no discharge, seabed disturbance issues, or other regulatory triggers, the MBNMS asked that Mythbusters include language and credits citing the filming was completed within the MBNMS, an area known for its rich diving heritage. The "Death By Diving" episode will premiered on Wed. Nov.25.

#### **Elkhorn Slough National Estuarine Research Reserve: Regulatory Planning Group**

On November 17th the MBNMS Permit Coordinator attended the multi-agency regulatory meeting to discuss the Parsons Slough Project. The proposed project is the result of an almost decade-long evaluation to broadly determine how to restore estuarine and marsh functioning to certain parts of the Slough. Currently the ESNERR is proposing to construct a sill, which will reduce tidal action and retain sediment at the mouth of Parsons Slough. Although this area is outside of MBNMS jurisdiction staff gave input to the process. The National Marine Fisheries Service's Habitat Conservation Program is the federal funder for the project, and the lead NEPA agency. This project has been very well thought out and all possible regulatory issues seem to have been addressed in the planning stage.

#### **New MBNMS web page on MPAs**

The MBNMS recently added new information about California's state MPAs to its web site addressing what they are, how they work, and the sanctuary's role in helping manage them. The section also includes updated information about the potential use of MPAs in federal waters of the sanctuary. The new web pages can be viewed at <http://montereybay.noaa.gov/resourcepro/resmanissues/mpa/mpa.html>

### **EPA's Measure W Watersheds to Better Quantify Water Quality Improvements**

On November 16<sup>th</sup>, the WQPP Director met with staff at the Central Coast Regional Water Quality Control Board to initiate discussions of prioritizing central coast Measure W watersheds (size of 12 digit hydrologic unit code) in order to focus efforts to improve water quality and be able to quantify it. The meeting focused on the Santa Rita Creek/Reclamation Ditch drainage that flows through Salinas and out to the sanctuary through Moss Landing Harbor. This drainage is known for its poor water quality conditions and toxicity to aquatic organisms. Efforts are being made to formulate a concept proposal for 319h grant funding to work with the agriculture community on irrigation nutrient management, implement creekside restoration, community outreach, tracking and monitoring efforts.

### **Hydromodification Criteria Being Developed for Central Coast Cities**

On November 17<sup>th</sup>, the WQPP Director attended a meeting hosted by the Central Coast Regional Water Quality Control Board and Low Impact Development Center. In attendance were local jurisdictions that are in need of developing hydromodification criteria to meet the requirements of their Storm Water Management Plans. The LID Center has a grant to help develop regional criteria which will assist local jurisdictions in planning efforts to reduce the amount of runoff from new development projects. The local jurisdictions have to decide whether to join the regional effort or develop their own criteria. It was suggested that the sanctuary participate on the Technical Advisory Committee for this process.

### **IRWMP Process Continues on Central Coast**

On November 18<sup>th</sup>, the WQPP Director attended two Integrated Regional Water Management Planning meetings in Northern Santa Cruz County and the Greater Monterey County. The Santa Cruz County plan has been in existence for three years and is being updated as required by the Department of Water Resources to be eligible for Prop 84 funding. They've already received \$12.5M to implement restoration, water quality and water supply projects. The Monterey County plan is in development currently determining how to prioritize project proposals.

## **EDUCATION, VOLUNTEER AND OUTREACH PROGRAMS**

### **MERITO youth media pilot project underway**

This week, MBNMS-MERITO staff completed six sessions of its 10-week pilot program titled *Multicultural Voices for Ocean Literacy*, in partnership with the Boys & Girls Club of Monterey County and the Monterey Institute of International Studies – Digital Media Commons center. This pilot is part of a long-term multi-partner effort integrating digital storytelling and self-directed learning of ocean sciences among underserved and STEM underrepresented communities in the central and southern California coasts. Funding for this project is being requested to the National Science Foundation – Informal Science Education Program.

### **MERITO invited to nationwide partnership on environmental art and education**

The MERITO program has been invited to collaborate with a new partnership between NOAA, the U.S. Forest Service, the National Aquarium, and the Wyland Foundation. This partnership is launching a five-year program called FOCUS (Forests, Ocean, Climate, and Us), a nationwide environmental art and educational campaign. FOCUS seeks to better educate people of all ages on the significance of water, forests, oceans, and climate change, inspiring all of us to become better stewards of our precious water resources.

### **MERITO Academy submits 3-year funding proposal**

On October 1, 2009, the Monterey Bay Sanctuary Foundation and Multicultural Education for Resource Issues Threatening Oceans (MERITO) submitted a proposal for funding from NOAA's Bay Watershed and Education Training grant program. The 3-year funding request would provide \$180,000 to run the Monterey-based, MERITO Academy. The MERITO Academy will provide high quality, sustainable science programming integrating watershed and ocean science into public education and private sector programs, resulting ultimately in active contribution to ocean protection by educated and engaged youth. The Academy will give 1200 - 1500 culturally diverse and underrepresented 5th-8th grade students the opportunity to experience year round, meaningful in-class and outdoor experiences through the use of local natural sites, scientists and experts. Youth will be reached through the use of watershed and ocean curricula addressing science, language arts, and English language development standards for the state of California. 45 teachers will receive 5 intensive days of training, a Watershed Science Kit, an opportunity for peer-to-peer sharing, and year round MERITO Staff support for programming. Through community service learning projects such as clean-ups, restoration projects, and water quality monitoring, teachers will help students build a sense of environmental stewardship and community pride.

### **MERITO presence at Salinas Adult School Community Advisory Council meeting**

On October 13<sup>th</sup> MBNMS-MERITO staff participated in the Salinas Adult School Community Advisory Council meeting. This is the second time MERITO staff has been invited to attend this meeting. The goal was to address how ESL programs are developing new bridges to career pathways, how the certification of workforce readiness has assumed a central role in the adult school's basic education and high school credit programs, and to share the school district's efforts to review alternative education opportunities for high school



age youth, and how the adult school can be part of an effort to bring back some of the many hundreds of out-of-school youth to school, jobs, and success.

#### **MERITO staff present at SACNAS National Conference**

On October 17, 2009, MERITO staff presented at the Society for the Advancement of Chicanos and Native Americans in Science (SACNAS) National Conference in Dallas, TX. The workshop “Serving our Communities Through Marine Science: An Ocean of Opportunities” complimented the conference theme of “Improving the Human Condition: Challenges for Interdisciplinary Science” by discussing opportunities to apply interdisciplinary marine science to growing societal challenges.

#### **MERITO Family Field Experiences and MPA outreach – Point Lobos field trip**

On Oct 25<sup>th</sup>, MBNMS Education staff hosted a field trip for local Latino families to Point Lobos State Reserve. 17 children and adults affiliated to the Boys and Girls Club of Monterey County in Seaside participated in the field trip, visiting this important state reserve for the first time. The field trip was part of a series of *Family Field Experiences*, designed to invite local families to visit Marine Protected Areas along the central coast of California and learn about the State MPA network. This is a joint effort between MBNMS Education staff, the MERITO program, and the Monterey Bay Sanctuary Foundation to offer MPA outreach to underserved communities in California.

#### **MBNMS Hosts Humboldt Squid Research and Education Cruise**

MBNMS Education staff hosted a Humboldt Squid education and research cruise aboard the R/V Fulmar, bringing together area educators from schools, scientists from Stanford University's Hopkins Marine Station and NOAA's National Marine Fisheries Service and Monterey Bay commercial fishermen. The purpose of the cruise was to introduce educators to the Monterey Bay National Marine Sanctuary, Voices of the Bay Fisheries Education program and current research being conducted on Humboldt squid. A collaboration between scientists, fishermen and educators continues to be the foundation for the Voices of the Bay place-based education program.

#### **MERITO Salinas community outreach – ALBA partnership**

On Oct 21<sup>st</sup>, MBNMS-MERITO staff attended a meeting with coordinators and education staff from the Agriculture Land-Based Training Association (ALBA) to discuss potential areas of collaboration to serve communities in Salinas and Watsonville. Two particular projects were identified as good opportunities for collaboration. First, a wetland habitat restoration initiative at ALBA's triple M ranch can offer hands-on opportunities for students enrolled in the MERITO Academy program to contribute to the Carneros creek watershed restoration plan and learn about wetland and riparian habitats connected to the Monterey Bay. Secondly, ALBA and MERITO are participating in a new planning process in collaboration with the Salinas Adult School, Hartnell College, and other local community-serving organizations, to offer career development and job training opportunities, integrating job skills, environmental responsibility and watershed stewardship.

#### **MBNMS Reaches 2400 Home Schoolers Over 3 Days**

The MBNMS education team has been participating in a new home school program at the Monterey Bay Aquarium. This program is designed to bring home school students and parents to the Aquarium to learn about marine science topics. Over the past three weeks, sanctuary staff have utilized a watershed model to demonstrate the connection between students' everyday activities and the health of the ocean. Over 2,400 students have attended the programs in the final 3 days.

#### **MBNMS Exploration Center Exhibits Audiovisual and Graphics Submittal Completed**

Sanctuary staff completed MBNMS Exploration Center AV/Graphics submission to BIOS exhibit developers. Comments on graphic panels, photos and interactive video kiosk scripts provided will enable BIOS to move the exhibit development to the next stage of Exhibit Construction Design.

#### **MERITO Academy reaches record numbers**

During the month of October 2009, the Monterey Bay National Marine Sanctuary's Multicultural Education for Resource Issues Threatening Oceans (MERITO) program kicked off its MERITO Academy at 6 new sites introducing an additional 287 students to the Monterey Bay National Marine Sanctuary. During the 2009-2010 academic year, 26 MERITO Academy programs will run at 18 sites in the cities of Marina, Seaside, Salinas, Pajaro, Monterey, Watsonville, and Freedom to deliver the 40-week MERITO Academy to an estimated 700 historically underserved students in the Monterey Bay Area. This sanctuary and BWET funded program provides hands-on, inquiry based watershed and ocean science experiences



2009 MERITO Academy Teacher Training at Elkhorn Slough.

**Photo Credit:** Sonya Padron

for 5th to 8th grade students who are predominately English language learners. Activities included an introduction to the MBNMS and a watershed model demonstration.

### **Southern Region Docents Honored**

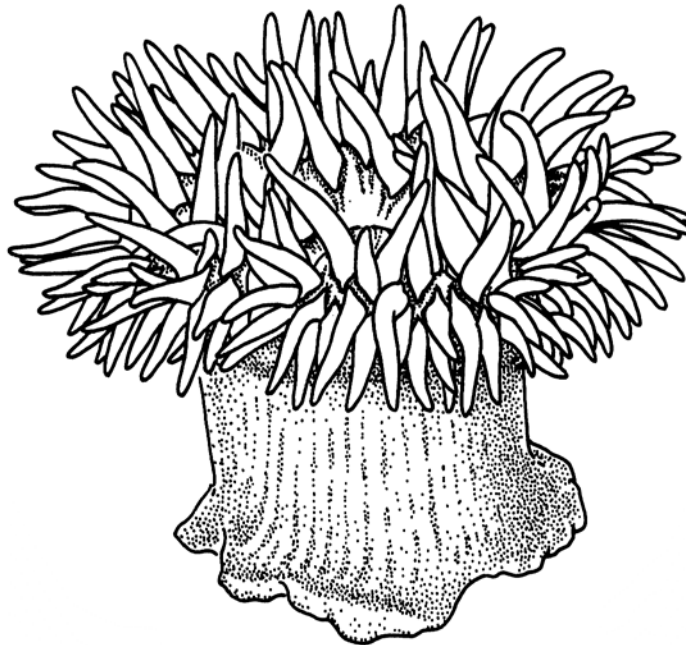
On Thursday October 29th, MBNMS Superintendent and staff honored the docents of the Coastal Discovery Center at San Simeon Bay at a small oceanside reception. CDC docents have volunteered almost 4,500 hours this past year at the center in the center at delivering a variety of public and school programs. This time is valued at nearly \$102,000. This small and dedicated group of sanctuary volunteers have made our tiny visitor center into a critical hub for the community.

### **MERITO Family Field Experiences and MPA outreach – Asilomar SMR**

On Nov 15th, MBNMS Education staff guided a tidepool exploration field trip at Asilomar State Marine Reserve (Point Pinos, PG) for local Latino families affiliated to the Boys and Girls Club of Monterey County. 8 children and adults from Seaside and Marina participated in the field trip, visiting this important state reserve for the first time. The field trip was part of a series of Family Field Experiences, designed to invite local families to visit Marine Protected Areas along the central coast of California and learn about the State MPA network. This is a joint effort between MBNMS Education staff, the MERITO program, and the Monterey Bay Sanctuary Foundation to offer MPA outreach to underserved communities in California.

### **MERITO youth media grant proposal (*Multicultural Voices for Ocean Literacy*) submitted to National Science Foundation.**

On Nov 19<sup>th</sup> MERITO staff from CINMS and MBNMS (sponsored by the NMSF) submitted a joint grant proposal to the National Science Foundation (NSF) for the third consecutive time, requesting funds to support their project *Multicultural Voices for Ocean Literacy*. This is a multi-partner effort integrating digital storytelling and ocean literacy to promote self-directed learning of ocean sciences among underserved and STEM underrepresented communities in the central and southern California coasts. Total requested budget is approximately \$1million, and if granted it will support the MERITO program for the next three years.



## SIGNIFICANT NEWS COVERAGE

- 10/6 – Courthouse News Service, “Monterey Bay Forced to OK Non-Native Fish”
- 10/8 – Monterey County Herald, “Events Calendar”
- 10/10 – Salinas Californian, “Monterey Bay Aquarium hits milestone”
- 10/12 – HeraldNet, “Forests under the sea featured on stamps”
- 10/15 – Metro Santa Cruz, “Elkhorn Slough's Troubled Waters”
- 10/17 – Los Angeles Times, “Behind the scenes at the Monterey Bay Aquarium”
- 10/18 – Monterey County Herald, “Events calendar”
- 10/19 – Santa Cruz Sentinel, “Monterey Bay Aquarium to host events celebrating its silver anniversary”
- 10/19 – San Luis Obispo Tribune, “Hearst Castle artwork to grace 2009 Christmas stamp”
- 10/22 – Monterey County Weekly, “New program lets NOAA scientists use ROV to remove industrial fishing gear from sensitive habitat.”
- 10/29 – San Luis Obispo Tribune, “Underwater robot cleans trash from the floor of Monterey Bay”
- 10/29 – San Luis Obispo Tribune, “Sanctuary leader to host meeting here”
- 10/29 – Santa Cruz Sentinel, “Robot cleaning trash from floor of Monterey Bay”
- 10/29 – Los Angeles Times, “Nightmares from the animal kingdom”
- 10/31 – Santa Cruz Sentinel, “Dan Haifley, Our Ocean Backyard: The good, the bad, and the beautiful”
- 11/2 – Monterey County Herald, “More wildlife, beaches damaged by SF oil spill”
- 11/12 – The Salinas Californian, “Monterey Bay gray whale watching takes to the skies”
- 11/13 – San Luis Obispo Tribune, “Marine Sanctuary Advisory Council applications due Friday”
- 11/16 – The Monterey County Herald, “PG to consider reservoir plan”
- 11/20 – Monterey County Herald, PG report cites cost of tapping into reservoir

## WEB SITE (<http://montereybay.noaa.gov/>)

### Recent Updates

Visit the web pages listed below to see recently updated sections of the MBNMS web site.

- Updated MPA sections of website  
<http://montereybay.noaa.gov/resourcepro/resmanissues/mpa/mpa.html>
- Position Announcement: Part Time Administrative Support Assistant  
<http://montereybay.noaa.gov/new/welcome.html#admin>

### Follow the MBNMS on Facebook and Twitter!

*Please take a few moments to peruse the site. Your feedback is greatly appreciated.  
Comments and suggestions can be sent to [andrew.white@noaa.gov](mailto:andrew.white@noaa.gov).*

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## FUN, OCEAN RELATED WEB SITES

### NOAA Online Media Library

<http://sanctuaries.noaa.gov/photos>

### Encyclopedia of the Sanctuaries

<http://www.ocean.com/Library/Encyclopedia/>

### Oceans Live

<http://www.oceanslive.org/portal/>

### SIMON

[www.mbnms-simon.org](http://www.mbnms-simon.org)

### Office of National Marine Sanctuaries

<http://www.sanctuaries.nos.noaa.gov/>

### NOAA Ocean Explorer

<http://oceanexplorer.noaa.gov/>

### National Data Buoy Center

<http://www.ndbc.noaa.gov/rmd.shtml>

### National Ocean Service

<http://www.nos.noaa.gov/>

### National Oceanic & Atmospheric Administration

<http://www.noaa.gov/>

### Thank You Ocean

<http://www.thankyouocean.org/>



## Learn More About Your Sanctuary

The Sanctuary Office Report is produced bi-monthly by the Monterey Bay National Marine Sanctuary in conjunction with Sanctuary Advisory Council meetings. To learn more about the Sanctuary please visit our web site at: <http://www.montereybay.noaa.gov/>.

To learn more about the Sanctuary Advisory Council please visit:  
<http://www.montereybay.noaa.gov/intro/advisory.html>

## The Office of National Marine Sanctuaries

The Monterey Bay National Marine Sanctuary is one of 14 marine protected areas in the National Marine Sanctuary System that encompass more than 150,000 square miles of marine and Great Lakes waters from Washington State to the Florida Keys, and from Lake Huron to American Samoa. The system includes 13 national marine sanctuaries and the Papahānaumokuākea Marine National Monument. Visit the ONMS web site at: <http://www.sanctuaries.nos.noaa.gov/>

## Get involved and stay informed!

To learn how to get involved in the Sanctuary visit:  
<http://montereybay.noaa.gov/educate/internship.html>

Sign up for the MBNMS listserv to receive email notices about upcoming Sanctuary events, and public meetings of the Sanctuary Advisory Council and its Working Groups:  
<http://montereybay.noaa.gov/discussiongroups/disgroups.html>.



## MBNMS Staff

**Paul Michel** – Superintendent  
**Karen Grimmer** – Deputy Superintendent  
**Andrew DeVogelaere** – Research Coordinator  
**Erica Burton** – Research Assistant  
**Jennifer Brown** – Research Associate  
**Steve Lonhart** – SIMoN Scientist  
**Jean de Marignac** – Field Scientist  
**Chad King** – SIMoN Data Analyst  
**Gary Conley** – SIMoN Water Quality Analyst  
**Kristine Faloon** – SeaGrant Fellow  
**Dawn Hayes** – Education & Outreach Coordinator  
**Liz Love** – Education Specialist  
**Sonya Padron** – Bilingual Education Specialist  
**Lisa Uttal** – Visitor Center Project Manager  
**Mike Eng** – Resource Protection Coordinator  
**Scott Kathey** – Regulatory Coordinator  
**Deirdre Whalen** – Community and Government Relations Coordinator  
**Brad Damitz** – Environmental Policy Specialist  
**Lisa Lurie** – Agriculture Water Quality Coordinator  
**Bridget Hoover** – WQ Protection Program Director  
**Carolyn Skinder** – Southern Education & Outreach Coordinator  
**Lisa Emanuelson** – Citizen Watershed Monitoring Network Coordinator  
**Lisa de Marignac** – Environmental Policy Specialist  
**Lisa Wooninck** – Resource Protection Specialist  
**Raymond Chisolm** – Program Specialist  
**Nicole Capps** – Advisory Council Coordinator  
**Christian Walters** – Administrative Assistant  
**Andrew White** – Network Manager  
**Sophie De Beukelaer** – GIS Analyst  
**David Minard** – R/V Fulmar Captain  
**Hans Burning** – R/V Fulmar Mate  
**Erik Larson** – R/V Fulmar Operator

## - Contact Information -

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